

## **Programming Projects**

### **Automated Chicken Coop**

Designed a drop-down door that would automatically open during the day and allow chickens to access a larger portion of their coop. It was operated using a pulley attached to a motor and was programmed using a Raspberry Pi running a Python script. It was controlled remotely from your phone.

### **Lego Motors**

Built fully functional Lego motors including V6 and V8 models, and used a Raspberry Pi to control a servo motor's rpm and create graphs to measure max rpm before failure.

### **Thermal Camera**

Programmed a Raspberry Pi to log temperature data and sound an alarm if someone is detected by a Lepton thermal camera.

### **Design Tools**

Created an excel calculator that determined the height of a boom support for Altec units based on input variables such as unit/outrigger type and chassis configuration. Developed multiple excel macros including one to organize bills of material and one to analyze the stress of bolt patterns. Also, developed SolidWorks macros used to organize assembly folders and automate dimensioning.

### **Coding Camps**

Practice coding exercises on LeetCode, CodingBat, PYNative, and have completed coding camps including freeCodeCamp and App Academy.